Tightening Our Beltways:
Urban Sprawl in Western Canada

A Western Cities Project Discussion Paper

Liam Stone,
Intern

with
Roger Gibbins,
President and CEO

October 2002

CanadaWest
FOUNDATION

This report was prepared by Canada West Foundation Intern Liam Stone, Intern, with Roger Gibbins, President and CEO. It is part of the Canada West Foundation's Western Cities Project. The opinions expressed in this document are those of the author and not necessarily those of the Canada West Foundation's donors, subscribers, or Board. Permission is hereby granted by the Canada West Foundation to reproduce this document for non-profit and educational purposes. Copies are available for download from the CWF web site (www.cwf.ca).

© 2002 Canada West Foundation

ISBN 1-894825-02-0

104-06956/

Introduction

Canada's cities are garnering increased attention as the country develops into a nation of urbanites. In western Canada, the proportion of the population living in census metropolitan areas (CMAs) rose from 67.2% in 1966 to 79.6% in 2001 (Statistics Canada 2002a). The development of these urban areas has a growing impact on many important aspects of Canadian life.

As western Canadians flock into urban areas, a vast amount of land is "swallowed" by what is commonly referred to as urban sprawl. This phenomenon is often associated with spread out residential developments and separate commercial areas built to favour drivers over pedestrians. Building wide roads, large parking lots and large homes to house a relatively small number of people uses up unsustainable quantities of land and financial resources.

Despite these costs, many of western Canada's cities are low-density urban environments. Large numbers of western Canadians are choosing to live in suburban developments outside of downtown. This paper addresses the tension between the ongoing criticism of sprawl and the residential location choices of western Canadians. The first section of the paper summarizes key research on the effects of urban sprawl, while the second section examines some of the current land use policies being implemented in Vancouver, Calgary, Edmonton, Saskatoon, Regina and Winnipeg. The paper concludes with a brief discussion of the factors behind western Canada's sprawling cities.

The Problems of Urban Sprawl

Although the drawbacks and benefits of low-density urban development are still being debated, in recent years the voices arguing against urban sprawl have become louder and more plentiful (Grant 2002). The impacts of sprawl can be divided into competitive, environmental, economic, and social categories.

Competitive Impact of Urban Sprawl

Cities may need to intensify their populations to attract new firms and industry clusters. The location of the firms and entrepreneurial activities that drive the information economy is related to the local talent pool (Florida 2002). For a firm making a location decision, having a young, well-educated work force may be as important as were low tax rates two decades ago.

Companies in knowledge-based industries value young workers because they are willing to work longer hours and are comfortable with the latest technology. Due to high turnover rates and an increasingly volatile labour market, knowledge industry companies must regularly recruit young employees. Consequently, competing companies "cluster" to share a local talent pool (Florida 2001). A city that is able to attract young workers is therefore better able to attract and retain knowledge-based companies.

To attract these young workers, a city must cater to their lifestyle preferences. Young Canadians (aged 20-35) are marrying and having children later in life, compared to previous generations (Statistics Canada 2002b), and they are looking for vibrant neighbourhoods in which to live. There is a desire for "authenticity of place," with unique businesses operating late into the night, and recreational opportunities that allow them to interact with other creative people (Florida 2002). Where they live depends, in part, on the ability of cities to meet these lifestyle preferences. Young workers are highly mobile, willing to move if they are offered a more attractive position in another city or country (Berdahl 2001).

Such culturally vibrant neighbourhoods are different from most of the suburban developments in western Canada's cities. Suburbs generally offer chain stores and small businesses that close early and are beyond a comfortable walking distance. Moreover, residents are required to drive across the city if they wish to see live performances or visit an art gallery. For example, in Calgary, the two major theatre groups, the symphony and the largest museum all operate in two buildings in the downtown core, while the vast majority of residents live in distant suburbs.

By failing to attract young workers, urban sprawl may be hurting western Canada's ability to attract and retain knowledge industry firms. For western Canadian cities to compete for business, they will likely need to compete for workers. Urban sprawl undermines a city's competitiveness.

Environmental Impact of Urban Sprawl

Urban sprawl has a number of detrimental environmental effects. Increased reliance on automobiles is the foremost of these problems, but sprawl also affects the water cycle and the agricultural land that surrounds Canada's western cities (Gillham 2002). Although urban growth is inevitable, it is important that the environmental costs associated with low-density growth be recognized in order to achieve a clear picture of the costs and benefits.

In most suburban developments, daily tasks require vehicles. Low-density suburbs separate commercial and residential areas, and force people to get into their cars to conveniently access amenities. These short trips, along with a daily commute to offices located in other parts of the city, make up the majority of vehicle-kilometres driven by the average family (Holtz Kay 1997). All of this driving has helped to make Canada the second largest producer of CO2 per capita among the G8 countries (IEA 2002).

Public transit is often suggested as an option to decrease the strain on transportation infrastructure in cities. Unfortunately, the effectiveness of public transit depends on the population density of the community that it serves. If demand is low, a city is forced to either subsidize a route that is not serving many consumers or serve the route less frequently. These outcomes make transit an impractical solution to traffic problems in low-density developments because of low ridership.

Low-density suburban growth also has adverse effects on the natural renewal of water reservoirs located under western Canada's cities. Parking lots and roads cause precipitation to enter the storm sewer system as runoff rather than filtering into underground aquifers (Gillham 2002). This slows the renewal of the aquifers located under cities and limits available water resources for the future.

Another worrying aspect of urban sprawl is the loss of agricultural land. Some of western Canada's cities are situated on high quality agricultural land and, as these cities expand, this productive land is lost (LUCAT 2001). Without effective land use planning, the sustainability of agricultural production, especially in Alberta and the British Columbia lower mainland, could be compromised.

Economic Impact of Urban Sprawl

In many cities, implicit subsidies are given to those who choose to live in new developments far from the city centre. New suburban developments require new roads and utility lines paid for by all city residents because mill and utility rates are based upon the average cost of services. Those who choose to live in new developments benefit from a subsidy because the rest of the population shares these costs (O'Sullivan 1996). It should be noted, however, that many cities off-set these costs by requiring developers to pay for a portion of the new infrastructure, the costs of which are passed along to the homeowners. This reduces the amount of subsidization.

One of the most important criticisms of urban sprawl is the economic waste created by putting points so far apart. When individuals must undertake long commutes along clogged artery roads, there is an economic cost in terms of lost production. The economy is also hurt by the amount of time it takes to

transport products from place to place. Each truck that crawls through traffic to reach its destination costs its company more in terms of driver time and fuel.

Social Impact of Urban Sprawl

Over the past half-century, many writers have addressed the isolating effect of low-density suburban development. The use of vehicles does not encourage the same level of social interaction that could exist if residents met each other on the street (Katz and Bradley 1999). Suburban residents are also less likely to take on additional community responsibilities due to increased commuting times (Putnam 2000). Some writers have gone as far as suggesting that the most common interaction between neighbours in suburbia is through the blinking turn signals on their cars (Holtz Kay 1997). Simply put, low-density suburban developments do not foster the same level of social interaction as denser, walkable, neighbourhoods.

New Urbanism

In The Death and Life of Great American Cities (1961), Jane Jacobs objects to low-density planning practices and praises neighbourhoods where residents know each other and thereby foster a safe community. Within these neighbourhoods, Jacobs witnesses a sense of pride that leads people to invest in their homes and businesses to improve the image of the streets around them. Jacob argues that diversity and activity lead to the creation of well-functioning neighbourhoods.

The proponents of New Urbanism use Jacobs' views to support a new approach to land use planning. New Urbanists believe that developments must be designed in a manner that provides a walkable environment and offers a variety of housing options and price points (Katz 1994). They argue that new developments must also offer commercial space within residential areas as well as easily accessible public buildings like community centres and schools. This mixing of uses is seen as the key to developing neighbourhoods where people know and interact with their neighbours, and develop a sense of community.

Many cities are beginning to incorporate these ideas. It appears that the pendulum has shifted and the value of compact neighbourhoods is taken for granted (Grant 2002). Although it remains to be seen whether the value of this new approach to community planning will live up to all of the benefits claimed by its proponents, it is certain that Jacobs and New Urbanism have provided an interesting alternative to the low-density suburban development methods used for the better part of the 20th century.

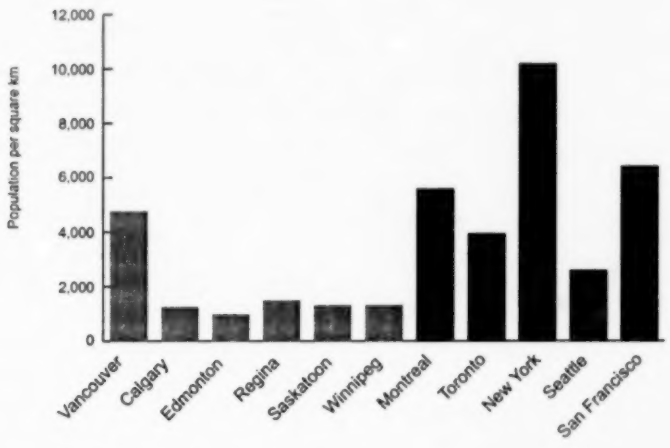
Low-density suburban developments are also not designed with the needs of those who cannot afford a private vehicle in mind (Duany 2000). Jobs located outside of areas that are regularly served by transit are difficult to reach, and workers are forced to pay for expensive alternative transportation. Meanwhile, people without driver's licenses (e.g., the elderly and youth) are unable to go beyond walking distance of their homes without relying on relatives or friends. Thus, we find the stereotypical soccer mom driving to every one of her children's activities.

Cities that implicitly segregate their population based on economic well being also suffer from run down neighbourhoods, higher crime rates, and social delinquency (Seguin et al. 2000). On this basis, some researchers argue that cities should strive to incorporate a mix of housing options and price points across neighbourhoods, rather than concentrating low income housing (Frisken et al. 2000). Most suburban neighbourhoods are poorly diversified, with developments offering housing starting at certain price points and attracting middle and upper class individuals. This economic stratification can amplify social problems by separating low-income communities from higher income communities.

Urban Land Use in Western Canada

Not surprisingly, with the exception of Vancouver, Canada's western cities have population densities that fall far short of some major US cities (Figure 1). This situation is created by policies – past and present - that encourage sprawl and discourage compact, central communities. Examples include

Figure 1: Population Density



Source: Statistics Canada, US Census Bureau
Note: These figures refer to city populations, not CMA or CMSA.

policies to widen roads and build new interchanges to ease commuting times from communities far from the downtown core, and plans to annex surrounding lands to create additional development opportunities in outlying areas. Some cities are explicitly committed to maintaining a low population density in existing communities by limiting high-density residential development. In the face of these policy choices, it is not surprising that urban sprawl is a growing problem in western Canada.

The following discussion highlights the stated urban growth goals for six western Canadian cities, and considers how these goals may impact urban sprawl in the years ahead.

Vancouver

The City of Vancouver has the most stringent policy framework in place for creating local neighbourhoods and dense communities. Vancouver's civic plan clearly prioritises transit and pedestrian mobility above automobiles, and seeks to ensure that the City will make alternative modes of transport more attractive. The civic plan also encourages the creation of distinct local communities where citizens can live, work and play within a relatively small area. The City aims to provide opportunities for residents to create a distinct local character, and to develop a sense of community pride.

It appears that Vancouver's current urban density allows the City to develop civic priorities beyond simply populating its downtown. The municipal government is now attempting to create neighbourhoods that are consistent with the principles of New Urbanism (consistent aesthetic features, easily walkable, and mixed-use developments). It remains to be seen whether Vancouver will be able to maintain this focus as it deals with traffic and other problems within the larger census metropolitan area.

Calgary

The continued strength of the Alberta economy has made Calgary the fastest growing city in Canada over the past decade (Statistics Canada 2002c). Population growth has been absorbed by new developments that spread in every direction from the downtown core. Consequently, in an area the size of New York City, Calgary houses one-tenth of New York's population.

As the city continues to spread, the City Council's priorities show a commitment to intensifying the population of Calgary's downtown core. The City also hopes to develop the city centre as a community that attracts individuals who wish to live close to where they work and take advantage of the lifestyle amenities that are offered downtown. Until these goals are achieved, however, Calgary's downtown

will continue to be a predominantly 9 to 5 office locale with the vast majority of workers leaving the downtown core for their increasingly long commutes home.

The frustration of commuting has put pressure on policy-makers to invest heavily in roads and other infrastructure to shorten commuting times and provide space for a greater volume of rush hour traffic. This solution to traffic problems could have a negative effect on the City's attempts to intensify its population. Making commuting easier by investing large sums of civic money into major arteries into the downtown core can only serve to encourage developments in the far reaches of the city by reducing the time costs associated with longer commutes.

Edmonton

Edmonton grew by 8.1% between 1996 and 2001 (Statistics Canada 2002c) and continues to spread outward, making it the least dense city among the six studied in this paper. Consequently, Edmonton's civic priorities include the development of neighbourhoods around existing zones of economic activity. By doing this, the City Council hopes to create smaller mixed-use communities within the city, and to attract new residents into areas where they can easily access jobs and lifestyle amenities. One of these economic activity zones is the city's downtown core. Similar to Calgary, Edmonton's downtown consists predominantly of office towers. Edmonton has committed to populating its downtown and making it an area that is attractive to visitors at any time of day.

If these strategies are effective, Edmonton may be able to intensify its population and create the types of communities that are attractive to individuals who are looking for easily accessible amenities. The area along Whyte Avenue, near the University of Alberta, exists as an example of a walkable district that combines cultural and lifestyle opportunities with higher density apartment buildings and detached single-family dwellings. (Admittedly, Whyte Avenue has been known to be a little too "vibrant" at night, but it still provides a good example of a unique area.)

Regina

Regina has performed relatively well in terms of maintaining urban density when compared to other western cities. Like the other cities, Regina has chosen to focus its efforts on building up its downtown core as a place that is interesting and attractive to residents and visitors. The City has placed an emphasis on upgrading existing housing stock rather than aggressively supporting new development, choosing to develop programs that assist homeowners in areas of the city where older houses have become run down.

If it achieves its desired results, this program could have many benefits. Refurbished older houses could offer cheaper living space to students and others who cannot afford larger homes in the suburbs. This could lead to retention of university graduates who enjoy living in a smaller community that offers them good accommodation at reasonable prices. For younger people seeking out living arrangements that are different from the traditional suburban home, refurbished older communities may offer Regina an advantage as the city competes for new residents.

Saskatoon

Saskatoon grew by 1.6% between 1996 and 2001 while the population of Saskatchewan and Regina declined over the same time period (Statistics Canada 2002c). This suggests that Saskatoon is competing for new residents effectively despite the population trends in the province as a whole. The planning department of the City of Saskatoon has prepared growth plans that seek to intensify the city's population within existing central neighbourhoods and develop the city along the river at a level that maintains the attractiveness of natural areas. This approach is meant to make Saskatoon a "river city" with natural areas easily accessible to a large proportion of the population.

These steps appear to take the concept of quality of life seriously when planning for population growth in Saskatoon. Making recreational areas and downtown easily accessible to new residents could give Saskatoon an advantage over cities where amenities are out of comfortable walking distance (or perhaps even driving distance).

One aspect of the Saskatoon's civic priorities that differs from the tenets of urban intensification is the City's specific plan to develop big box stores. These stores rely primarily on customers who drive to the store and park in large parking lots. They may also have a negative effect on smaller local businesses that are currently serving the community in more central locations.

Winnipeg

The City of Winnipeg's 20-year plan sets out an explicit commitment to develop and populate neighbourhoods and populate its downtown core. The City's vision for downtown includes retail facilities, mixed housing and easy accessibility. These amenities, along with local cultural institutions, are intended to revitalize downtown and encourage people to move back to the downtown.

Winnipeg's approach to neighbourhoods differs slightly from that put forward by critics of urban sprawl. The City's plan suggests that low-density housing will be paired with low-density commercial and civic developments to ensure that city roadways are not clogged. High-density developments are to be constructed near available transit in order to maintain existing traffic levels. This approach separates uses and keeps high-density options out of neighbourhoods where personal vehicles are the primary mode of transportation. Winnipeg's population is currently not growing, but in the event of new growth, the City may be forced to expand its roadways and infrastructure if it wishes to maintain the low-density of its neighbourhoods outside of downtown.

Opportunities and Challenges Ahead

Given the compelling arguments with respect to the costs of urban sprawl, and given the determination of many city planners to encourage population density, one would think that the prospects for a new urban landscape in western Canada would be good indeed. However, the reality is that a great deal of inertia is likely to confound any rapid progress towards population density.

Part of the reason for this inertia has been touched on above. The property tax system, for example, shares the costs of urban sprawl, and may in some cases encourage it through subsidization. Yet, while the tax system is at least potentially open for change, other constraints are more implacable.

There are, for example, institutional factors that come into play. The ward system, used for electing city council members in western Canadian cities, gives a great deal of power to suburban constituencies. This, in turn, takes us to the heart of the problem. While research has shown that younger Canadians may favour the lifestyle available in densely populated areas, for many western Canadians (and quite likely for the majority of city residents) the suburban lifestyle is still the ideal. Western Canadians with families may compare their suburban plot, single family home and two-car garage with deeply embedded and often negative stereotypes of high-density life. The reality is that most suburbanites are likely to remain just where they are.

The flight from inner cities is not simply an act of fancy; it reflects strongly held values about what constitutes quality of life. Those values will not change overnight, and until the majority of urban residents "catch up" with and (literally) buy into the arguments for population density, suburbanites will use their very considerable political muscle to protect their lifestyle. It will be difficult, therefore, to muster the political will among local politicians to promote population density if it is seen to come at the expense of suburban constituents.

Above all else, it is extremely difficult to change the basic physical layout of urban environments, or to do so beyond the margins. Municipal infrastructures reflect assumptions built up over the past century that the automobile will be the primary means of transportation. Road systems are in place, or not in place. Physical structures from homes to office towers, structures with life spans covering several generations, have been constructed in accordance with existing planning guidelines. Cities can be transformed, but only at the margins, and only in the context of new growth. The existing physical infrastructure is extremely difficult to transform.

This may mean that while urban density strategies can be pursued, urban density will have to co-exist with urban sprawl for the foreseeable future. In the short-term, this is simply the only option. If, however, the prophets of population density are correct, and if new generations opt permanently for an urban lifestyle, then the physical face of western Canadian cities will change. Not, however, in the short term, and not to the extent of rolling back urban sprawl.

Conclusion

The effects of urban sprawl on the competitive position, economy, environment and social atmosphere of North American cities have been well documented. Sprawling cities suffer from the high cost of public transit, underdeveloped infrastructure, less social cohesion and barriers to the development of dynamic communities. With the exception of Vancouver, western Canada's cities are among the least dense in North America, so it can be reasonably argued that these cities suffer from the effects of sprawl and may benefit from urban intensification.

It appears that western Canada's cities have set intensification (at least concerning revitalizing their downtown communities) onto their policy agendas. The rise of New Urbanism in planning circles has put mixed-use development at the forefront of urban design and cities have all started to use these planning principles in their efforts to reinvigorate city centres and central communities. What remains to be seen is whether the western Canadian cities will be able to effectively adopt these mixed-use planning principles. Currently, new urban development continues to rely primarily on the automobile to get residents from place to place, and on the detached single-family dwelling to house residents. This arrangement will probably fail to increase urban density to the extent necessary to create dynamic neighbourhoods that are able to support local commercial establishments.

With the exception of Vancouver, western Canada's cities are facing the problems associated with a lack of urban density. Each civic government has committed to revitalizing its downtown, but this may not be enough. Continued development at city margins will continue to have competitive, social, environmental and economic effects on each city as a whole. ■

Sources

Berdahl, Loleen. 2001. *Looking West: A Survey of Western Canadians.* Calgary: Canada West Foundation.

Duany, Andres et al. 2000. *Suburban Nation.* New York: North Point Press.

Florida, Richard. 2001. *The Economic Geography of Talent.* Pittsburgh: Carnegie Mellon University.

Florida, Richard. 2002. *The Rise of the Creative Class.* New York: Basic Books.

Frisken, Frances et al. 2000. "Governance and Social Sustainability: The Toronto Experience." In Richard Stren and Mario Polese, eds., *The Social Sustainability of Cities.* Toronto: University of Toronto Press.

Gillham, Oliver. 2002. *The Limitless City.* Washington: Island Press.

Grant, Jill. 2002. "Mixed Use in Theory and Practice: Canada's experience with implementing a planning principle." *Journal of the American Planning Association,* 63:1.

Holtz Kay, Jane. 1997. *Asphalt Nation.* New York: Crown Publishers Inc.

International Energy Agency. 2002. *Key World Energy Statistics 2002.* Paris: International Energy Agency.

Jacobs, Jane. 1961. *The Death and Life of Great American Cities.* New York: Random House.

Katz, Bruce and Jennifer Bradley. 1999. "Divided We Sprawl." *Atlantic Monthly,* December 1999.

Katz, Peter. 1994. *The New Urbanism: Toward An Architecture of Community.* New York: McGraw Hill.

O'Sullivan, Arthur. 1996. *Urban Economics: 3rd Edition.* New York: Irwin.

Putnam, Robert. 2000. *Bowling Alone.* New York: Simon & Schuster.

Seguin, Anne-Marie and Annick Germain. 2000. "The Social Sustainability of Montreal: Local or State Matter?" In Richard Stren and Mario Polese, eds., *The Social Sustainability of Cities.* Toronto: University of Toronto Press.

Statistics Canada. 2002a. *Population Counts by Urban and Rural, 2001 Census.* On-line material. August 20, 2002. www.statcan.ca.

Statistics Canada. 2002b. "Trends in Canadian and American Fertility." *The Daily*, July 3, 2002.

Statistics Canada. 2002c. *Community Profiles 2001.* On-line material. August 20, 2002. www.statcan.ca.

Stren, Richard and Mario Polese. 2000. "Understanding the New Sociocultural Dynamics of Cities: Comparative Urban Policy in Global Context." In Richard Stren and Mario Polese, eds., *The Social Sustainability of Cities.* Toronto: University of Toronto Press.

Linking Policy to People

Since 1971, Canada West Foundation has provided citizens and policy makers with non-partisan, non-ideological research on a wide range of issues of critical importance to western Canadians. The continuation of our programs depends upon the support of individuals, corporations, and granting foundations. We encourage all who believe in our mission to become Friends of Canada West and thereby ensure that our initiatives continue to have maximum impact.

For more information or to become a Friend, please contact the Canada West Foundation by phone (403-264-9535) or e-mail (cwf@cwf.ca).

Canada West Foundation is a Registered Canadian Charitable Organization (#11882 8698 RR 0001).

The Benefits of Friendship...

Supporters
(Friends that contribute between $100 and $249) receive: a one year subscription to our newsletter and executive summaries of CWF reports.

Contributors
(Friends that contribute between $250 and $499) receive: a one year subscription to our newsletter and all regular CWF publications except special reports.

Associates
(Friends that contribute between $500 and $999) receive: a one year subscription to our newsletter and all regular CWF publications including special reports.

Patrons
(Friends that contribute between $1,000 and $4,999) receive: all benefits of the Associate level plus special briefing sessions with CWF Policy Analysts.

Benefactors
(Friends that contribute $5,000 or more) receive: all benefits of the Patron level plus invitations to exclusive Benefactor events and special recognition in the Annual Report.

Friends Also Receive:
- 10% discount on CWF events
- 30% discount on CWF special reports
- CWF Annual Report
- Official tax deductible receipt

Subscriptions

Canada West Foundation is pleased to offer annual subscriptions for $200. Students can subscribe for a reduced rate of $35 (student identification is required). Seniors (65+) can subscribe for a reduced rate of $50. Subscribers receive the CWF newsletter, all regular CWF publications, executive summaries of all special reports, and a 20% discount on special reports.

CanadaWest FOUNDATION

sign me up!

☐ I would like to become a **Friend.**

The amount of my contribution is: _____

☐ I would like to **Subscribe** ☐ regular $200 ☐ student $35 ☐ senior $50

☐ My cheque (payable to Canada West Foundation) is enclosed.

☐ Please charge my VISA. Account #: _____

Expiry Date: _____ Signature: _____

☐ I would like my donation to be anonymous.

Name: _____

Organization: _____

Address: _____

_____

Ph: _____ Fax: _____

E-mail: _____